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THE EFFECTIVENESS OF THE IMPLEMENTATION OF THE URBAN FARMING PROGRAM IN INDONESIA

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Food security;
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ABSTRACT

Urban agriculture in the current era is considered very important to meet the food needs of urban people in various countries. This study aims to determine how effective urban agricultural activities are and to what extent urban agriculture can provide benefits by realizing government policy or program objectives. This research is qualitative research that uses a library research approach. The results show that the indicators of Program Target Accuracy, Program Socialization, Program Objectives, and Program Monitoring show that urban farming programs in all major cities in Indonesia are working well and have resulted in many better communities.

INTRODUCTION

Population growth is a common problem in cities. Urbanization factors and natural population growth are two causes of increasing population growth. These two factors will have an impact on various problems in the city, such as a lack of space, especially for agricultural needs. because the amount of land available in the city center is increasingly limited. In general, any increase in population will result in an increase in basic needs such as food, clothing, and shelter.

Cities are centers of activity that consume a lot of natural resources, which contribute greatly to environmental problems around the world. From an environmental point of view, the city is considered an ecological problem because it is related to an imbalance between human needs and the availability of natural resources. Therefore, to achieve sustainable development, urban planning must be carried out in conjunction with environmental planning (Rosyad et al., 2020).

Indonesia's urban population has increased rapidly in recent years. This is indicated by the increase in population in urban areas compared to rural areas. In 2022, 56.7% of Indonesia's population live in urban areas, and this will continue to increase to 66.6% in 2035 (Safitri et al., 2022). The World Bank estimates that by 2045, 220 million Indonesians will live in cities. This represents 70% of the total homeland population. The flow of urbanization causes the urban population to increase. To deal with the problem of urbanization around the world, governments and society must pay attention and comprehensive management.

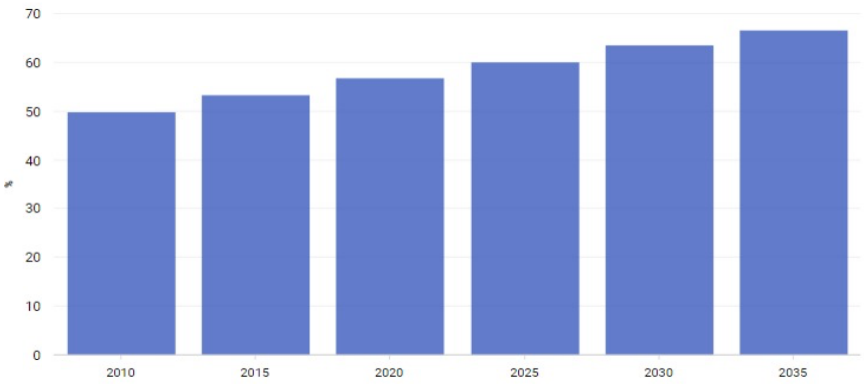

Figure 1
Percentage of Indonesia's urban population 2010-2035
Source : Indonesian Statistics Agency, 2021

Indonesia's urban population has increased rapidly in recent years. This is indicated by the increase in population in urban areas compared to rural areas. In 2022, 56.7% of Indonesia's population live in urban areas, and this will continue to increase to 66.6% in 2035 (Safitri et al., 2022). The World Bank estimates that by 2045, 220 million Indonesians will live in cities. This represents 70% of the total homeland population. The flow of urbanization causes the urban population to increase. To deal with the problem of urbanization around the world, governments and society must pay attention and comprehensive management. So that urban farming activities are expected to be able to meet food needs independently and slowly help food security in urban areas and can improve environmental conditions and create a quality healthy environment (Suwarlan, 2020).

The urban gardening trend, or "urban garden", involves urban residents, including young people, cultivating vacant land in the city and using social media to encourage their efforts. One of them is Indonesia Berkebun, which was founded in 2011 and is spread across 33 cities with 9 universities and the largest island in Indonesia. As many studies have shown, urban agriculture not only solves problems such as access to and availability of food but also creates new jobs and reduces poverty. Some countries have found urban farming to be the best.

Urban farming or urban farming started in the United States as a solution to the economic and economic problems of many countries during the world wars, mainly due to high vegetable prices. During World War II, about 20 million victory parks were built, one of which was "Victory Park". With the help of the Victory Garden program, the US government was able to meet 40% of the food needs of its citizens at that time. The importance of improving human quality is demonstrated by the achievements of urban farming.

Three values underlie urban farming: ecological value to create green spaces in cities, profitable economic value and sustainable income—as seen in Cuba—and social educative value to support the initiative. In the face of a global food crisis and depending on rural production, urban dwellers may act as food producers and not just consumers. However, urban agriculture in Indonesia still faces several challenges, such as a lack of government support and low community participation in small-scale land ownership (Fauzi, 2021).

It is now considered that urban agriculture is essential to meet the needs of urban communities in various countries. Conceptually, urban agriculture is an agricultural business carried out by urban communities to produce organic food. Currently, urban farming is intended to develop in dense urban areas that do not have much free space. According to

(Suwarlan, 2020), urban farming can indirectly encourage the creativity of urban communities in farming more practically.

Over the years, research on the benefits of urban agriculture has been carried out and reviewed from various social, economic, and environmental aspects (Atmaja & Akagi, 2021). Literature studies divide the sociocultural benefits of urban agriculture into four (four) components: community involvement, health and welfare, education, and the economy (Atmaja & Akagi, 2021). Furthermore, research (Pölling et al., 2017) shows that urban farming is more successful and sustainable in urban areas that are adapted to urban areas compared to urban areas that are not (Campbell & Rampold, 2021). This is because local government networks fail to provide information to the public about urban farming in Florida due to a lack of basic knowledge and necessary coaching, as well as a lack of available resources. This research is different from previous research because the aim is to find out how successful the agricultural urban farming program is and whether urban farming can be implemented optimally as an innovation in increasing urban food security, especially in household food security. Thus, for this research, the analytical knife is used with Elmore's approach to public policy analysis, which consists of two elements: policy content and implementation context (Yulianto et al., 2015).

Because agricultural land has begun to shrink due to the increasing population density in urban areas, food commodities are the most needed commodities in urban areas. As a result, urban areas became more dependent on food supplies from villages or other areas. This problem arises because land use has changed greatly from agricultural land to infrastructure, industrial, and housing developments (Belinda & Rahmawati, 2017). Therefore, Government Regulation Number 18 of 2012 concerning Food and Government Regulation Number 17 of 2015 concerning Food Security and Nutrition 2015 stipulates that adequate food availability for households both in terms of quality and quantity is safe, fair, and affordable. One solution to meet urban food needs is urban agriculture, also known as urban agriculture. This is because cities have more social, financial, and human capital, which can motivate the public and private sectors to take corrective and other preventive actions to meet food needs.

Urban agriculture, also known as urban agriculture, has the goal of increasing urban food security and improving people's welfare. In addition, the aim of urban farming is to improve urban spatial planning. This is expected to reduce slum areas in the city center and turn the land into productive land, which in turn can improve the community's economy. This study aims to determine how effective urban agricultural activities are and to what extent urban agriculture can provide benefits by realizing the goals of government policies or programs.

METHOD RESEARCH

This study uses qualitative methods, which emphasize analysis or description. The subject's perspective is preferred in this method, and researchers use the theoretical basis as a guide to direct their research process to real situations in the field.

Edi Subagyo's Program Effectiveness Theory is used in this research. This theory consists of four precise dimensions, namely the right program targets, the right targets for implementation, program socialization, program outreach to the community, program objectives, formulating program objectives that are in accordance with their potential, and,

finally, monitoring, namely monitoring the program. Periodically (Rusida, 2016). This research also looks at how effective urban farming is through its benefits for food security. This study uses the theory of food security from (Britain, 2001), which is when everyone has access and control over the amount and quality of food that is sufficient to lead an active and healthy life.

This study used library questions, a series of actions related to the data collection process in the library (Mahmud et al., 2011). Library research is research that uses library materials, such as books, journals, documents, and historical records, according to Abdul Rahman Sholeh (2005).

RESULT AND DISCUSSION

Overview of Urban Farming in Indonesia

After the 1997–1998 economic crisis, urban farming movements have been seen in Indonesia. However, urban farming has not been prioritized and properly implemented in Indonesia during its development. However, the Food Agriculture Organization (FAO) estimates that nearly 75% of people living in developing countries will live in cities. Urban Farming efforts by using open land around the community are called urban farming. The land area used is usually between five and fifty square meters. This urban farming activity is carried out in several cities in Indonesia, such as Jakarta, Medan, Surabaya, Bandung, and Semarang. According to urban agricultural activities, article 1 paragraph 4 of Law No. 41 of 2009 stipulates that reserve land for sustainable food agriculture is land that has the potential to be protected for use as sustainable food agriculture land in the future with the aim of maintaining land availability and suitability.

Urban agricultural activities in Indonesia occur in many big cities, one of which is Jakarta. Governor Regulation No. 14 of 2018 concerning the Implementation of Urban Agriculture provides the basis for the people of Jakarta to implement urban agriculture (Suhayatmi, 2022). Regulations can encourage citizens to participate in urban farming. Apart from that, urban farming is definitely supported and assisted by members of the DKI Jakarta provincial government, such as governors, mayors, sub-district heads, village heads, and UKPD (Regional Work Units) DKI Jakarta provincial government, as well as other stakeholders, such as academics, businesses, institutions finance, media, and urban farming activists (Suhayatmi, 2022). Urban farming or urban farming uses fewer chemical pesticides, is easy to do, and is environmentally friendly because it uses ready-made commodities, resulting in healthier and fresher agricultural products. In addition, it has the ability to meet the nutritional needs of individuals and groups while also generating economic, educational, and health benefits.

To participate in the food self-sufficiency program, the Food Security and Agriculture Service will use Urban Farming, according to Article 5 letter j Regional Regulation Number 14 of 2016 concerning the Formation and Composition of Regional Apparatuses for the City of Surabaya, "The Type A Agriculture and Food Security Service organizes government affairs in the field of Food, Agriculture, and Maritime Affairs and Fisheries." The DKPP oversees the assets of the Surabaya Provincial Government apart from working in areas approved by law, such as the Grand Forest Park and the Mangrove Botanical Garden (Surabaya Food Security

Service, 2023). Semarang Mayor Regulation Number 24 of 2021 concerning the Urban Agricultural Cultivation Movement in the City of Semarang supports urban agriculture. So far, 151 urban agricultural groups have participated in the "Ayo Nandur" program promoted by the Semarang City Agricultural Service (Semarang City Agriculture Office, 2023). The number continues to increase because the Department of Agriculture holds urban agricultural training every Saturday (Mundiyah et al., 2020).

The regional government of Medan City issued Regional Regulation 8 of 2004 concerning Licensing for Agricultural and Livestock Businesses. According to points a and b, due to the needs of the people of Medan for the assumption that comes from agricultural and livestock businesses, there has been an increase in agricultural and livestock businesses to meet the demands of the people of Medan and to fulfill the supervisory responsibilities of the Medan city government. This helps people contact the urban farming program. The Medan City Food Security Service, as part of local government support, collaborated with TP.PKK Kelurahan Sei Agul, Head of Environment, PIK R Kelurahan Sei Agul, and PAAR Cinta Kasih Group "Melati" to create urban plants in the courtyard of the Lurah Office for the Sei Agul area.

In accordance with the Mayor of Bandung Regulation No. 185 of 2015 concerning the Delegation of the Mayor of Bandung to the Sub-District and Lurah for Agriculture and Food Affairs, the urban farming program is overseen by the Food and Agriculture Urban Agriculture Service. This program aims to reduce the supply of food from outside the city to the city of Bandung and make it more independent in terms of food consumption (Mahmuudah, 2020). Several cities in Indonesia practice urban farming by local regulations or laws. They also receive support from government agencies such as the food security service, the agriculture and animal husbandry service, as well as the local sub-district and urban village.

Implementation of Urban Farming in Indonesia

In recent years, urban farming has developed in Indonesia. This trend stems from the urban community's awareness of a healthy lifestyle by consuming organic farm food that is made by themselves. Many youths see urban farming as an opportunity to do business. In addition, local governments are contesting urban farming methods. The DKI Jakarta Provincial Government's Medium Term Development Plan (RPJMD) 2013–2017 covers the urban agriculture sector. Using the theory of policy implementation from (Elmore, 1979), in the implementation of urban agricultural policies, it is necessary to show that policy implementation begins with identifying the network of people involved in the service process. In addition, it is necessary to identify the actors' contacts, activities, strategies, and goals.

Table 1

Implementation of Urban Farming Policy in Big Cities in Indonesia

No.	City	Urban farming activities	Actors/Contacts involved	Strategy and Goals
1.	Jakarta	Grape Cultivation Training and green alley	The Office of Food Security, Maritime Affairs and Agriculture (KPKP), and KAJ	Solve problems such as nutrition, food, and welfare.

2.	Surabaya	• Nursery activities • Demonstration activities • Planting Activities • Post Harvest and Marketing	Head of the Surabaya City Food and Agriculture Security Service, Secretary: Agricultural Development Section, Field Extension Officer	Helping the poor meet their needs for healthy and nutritious food and helping reduce family expenses
3.	Medan	• Ornamental Plant Cultivation • Hydroponic cultivation of vegetables and fruits	Agricultural Development Polytechnic (POLBANGTAN)	Increase income and support food security
4.	Semarang	Planting organic vegetables, Aquaponic Activities	Agriculture Office of Semarang City	Supporting food stability and helping agriculture in the city of Semarang
5.	Bandung	• Agricultural cultivation • Process organic waste for animal feed or compost.	Bandung City Food Security and Agriculture Service (DKPP).	security in disaster mitigation in the city of Bandung

Source: Processed by Researchers, 2023

By spreading chili cultivation covering an area of 4.7 hectares in the DKI Jakarta area which is used by 71 KTs, as well as 2 hectares of shallots in the Halim Perdana Kusuma Air Force area, the Directorate General of Horticulture has participated in urban farming activities (Soim, 2021). Yellow sticky pest control kits, chili seeds, shallot seeds, and organic fertilizer will be provided. In terms of urban agricultural policies, the Horticulture Village development program is led by the Minister of Agriculture Syahrul Yasin Limpo (SYL). This program is aimed at farmers who have limited land and are already using it (Soim, 2021).

In collaboration with the Office of Food Security, Maritime Affairs and Agriculture (KPKP), the City of Jakarta and KAJ will provide technical training to a number of residents of West Jakarta who wish to develop grape plantations. The more people who can farm in urban areas, the more problems that can be solved, such as nutrition, food and welfare. Given the high costs of agricultural production in urban areas, such as the price of fertilizers, assistance, and guidance from the government must be intensified to attract public interest. The urban farming program continues to be encouraged in other administrative areas such as South Jakarta, not only in West Jakarta. According to Hasudungan Sidabalok, head of the South Jakarta KPKP Sub-agency, residents who want to farm on vacant land in their area receive free seeding and equipment assistance. The South Jakarta government started the Green Alley

program which utilizes land in every sub-district. Not only agriculture but also animal husbandry is utilized. According to (Parede et al., 2023), there are around 800 dairy cows in his area which are now spread across Mampang Prapatan, Pancoran, and Pesanggrahan.

Since 2009 until now, the Surabaya city government has carried out urban farming through the Department of Agriculture. This effort aims to reduce family costs and help poor families get nutritious food. This program is aimed at the poor in Surabaya, especially farmers. Urban farming programs can help farmers get seeds (mustards, spinach, kale), seeds (Lombok, eggplant, tomatoes), liquid organic fertilizer, and planting media. PPL is assigned by the Department of Agriculture to work in the field to assist, encourage and provide technical guidance to farmer groups.

Several communities in the center of Semarang City practice urban farming. They are interested in growing organic vegetables, but they don't have enough land to grow them. The results of the Semarang city government's efforts to encourage residents to develop city farms are starting to show. To achieve food security, urban farming is recommended in Semarang, and there are only around 150 women farming groups (KWT) gardening in the city center. The Department of Agriculture is training the existing KWT Lunpia. "We have increased training since the beginning of the pandemic until now" (Wahdah & Maryono, 2018). Overall, there are 80 aquaponics activists in Semarang City, according to the Urban Farming Activity Profile. Most of the aquaponic farming in Semarang City is concentrated around Kandri Village, but 2 (two) of them are scattered in other areas in Semarang City, namely in Kalipancur Village and Jatisari Village (Wahdah & Maryono, 2018). Currently, there are 151 urban agricultural groups, according to the Semarang Municipal Agriculture Service. The number continues to increase along with urban farming training provided by the Ministry of Agriculture. Urban farms are now able to meet the food needs of every family, but some business-class farms are already able to sell their agricultural products.

To overcome limited land and increase food security, urban agriculture or gardening and farming in the yard of the house is recommended by the Agricultural Development Polytechnic (Polbangtan) Medan. In Medan, Friday, Yuliana Kansrini, director of the Medan Polbangtan, stated that the hydroponic concept allows the development of urban agriculture without the need for large areas of land and can be done using the yard behind the house (Juraidi, 2021). Modern gardening does not only produce ornamental plants but also fruit and vegetables. You don't need to have a large yard to grow lots of vegetables, such as kale, mustard greens, and pakcoy, at home. Through a hydroponic system, urban agriculture supports food security and increases income (Juraidi, 2021).

A food security workshop in the context of disaster mitigation in the city of Bandung will be held by the Food and Agriculture Security Agency (DKPP). The steps taken by the DKPP are in line with the main tasks of regional heads in the management of food, agriculture, and fisheries. DKPP's commitment to achieving food security is very important. The development of food production based on local resources, institutions, and culture is one of the concrete efforts that has been made by DKPP for food security. Building and developing an integrated urban farming model called Buruan SAE is a clear example of DKPP's success. At least 335 groups in the city of Bandung have adopted the Buruan SAE model (Maulud, 2023). These

benefits have been felt by many adopters. as a source of food for families and reduce food costs. In addition, it is a medium where people gather. Guyub is committed to maintaining the sustainability of the city. According to (Maulud, 2023), it is hoped that SAE will also become part of Bandung City programs that have already started, such as Kang PISMAN and Tanginas. The Kang Pisman program in waste management in Bandung was carried out at SAE hunting locations because one of the eight functions of SAE hunting is to process organic waste for animal feed or compost. Tanginas, a stunting response program with safe and healthy food, is also fully supported by SAE's game because the agricultural cultivation that is being carried out is healthy, natural, and economical (Maulud, 2023).

Effectiveness of Urban Farming in Indonesia

Edi Subagyo's Program Effectiveness Theory is used in this research. This theory consists of four precise dimensions, which include appropriate program objectives, appropriate program implementation, program outreach to the community, program objectives, formulation of objectives that are in accordance with their potential, and finally, program monitoring. By implementing urban farming in several big cities in Indonesia, four dimensions of effectiveness are fulfilled, namely:

1. Program target accuracy: in several big cities it was found that the target of the urban farming program was the city community, where this was said to be appropriate because urban farming is an urban farming activity, the results of this urban farming are for food security, especially for the poor in urban areas. Target accuracy refers to how precisely program participants are with the goals they have previously set. This study aims to determine who the targets of the urban farming program are, and in this case, the target groups are the poor and farmers who work as farmers in big cities. It is hoped that the actions of urban farming will be adjusted according to the program's target groups, namely urban farmers and poor farmers, to determine whether urban farming programs in Indonesia are successful. According to Subagyo in (Budiani, 2007), effectiveness is the suitability between the product and the intended purpose. This research shows that increasing people's knowledge, skills, and abilities can have a positive impact on society.
2. Program socialization: the urban farming program is carried out with various outreach in various big cities through several activities/events held by the food security service, agriculture service, and polytechnics or community institutions in these big cities. According to (Budiani, 2007), socialization must be carried out so that people understand the urban farming program as a whole and thoroughly about its activities, benefits, and how the program is implemented. This socialization indicator section is then divided again. The sections are as follows: type of socialization, method of socialization, level of intensity of socialization, reasons behind socialization, and, finally, benefits of socialization. The form of socialization is carried out through training and implementation of the urban farming program, and media socialization is carried out directly by involving the community. The average socialization intensity is enough to understand urban farming activities. Finally, many people see the benefits of this socialization. One of the benefits of this socialization is knowing how urban farming is done and its benefits.

3. Program objectives: All programs in these big cities show that the goal is food security and increasing people's income. There are also additional goals such as reducing disasters and improving people's nutrition. Because the average urban farming product can be consumed and consumed by the community, this activity can be considered to have achieved its goal. Therefore, the urban farming program has achieved its goals, as stated by Handayaningrat. If the program achieves its goals and objectives, then the program is considered effective (Handayaningrat, 1996).
4. Monitoring: Government agencies and community agencies monitor urban farming programs to see progress and provide the necessary assistance to do so. To find out how effective this program is, this monitoring is carried out to see the extent of its benefits for program participants. One of the perceived advantages of implementing the urban farming program is the ease of obtaining urban food supplies.

CONCLUSION

Researchers conducted research on the effectiveness of urban agricultural programs in Indonesia, as measured by indicators of the accuracy of objectives, scope, objectives, and program monitoring, as well as implementation theory. The results show that the PerpuSeru program at the Pamekasan District Public Library is effective.

REFERENCES

Atmaja, B. T., & Akagi, M. (2021). Two-stage dimensional emotion recognition by fusing predictions of acoustic and text networks using SVM. *Speech Communication*, *126*, 9–21.

Belinda, N., & Rahmawati, D. (2017). Pengembangan urban farming berdasarkan preferensi masyarakat Kecamatan Semampir Kota Surabaya. *Jurnal Teknik ITS*, *6*(2), C165–C168.

Britain, O. G. (2001). *The Impact of Rice Trade Liberalisation on Food Security in Indonesia*. Oxford.

Budiani, N. W. (2007). The Effectiveness of Youth Youth Unemployment Program "Eka Taruna Bhakti, Sumerta Kelod Village, East Denpasar District, Denpasar City. *Journal of Economics and Social Affairs*, *2*(1), 49–57.

Campbell, C. G., & Rampold, S. D. (2021). Urban agriculture: local government stakeholders' perspectives and informational needs. *Renewable Agriculture and Food Systems*, *36*(6), 536–548.

Elmore, R. F. (1979). Backward mapping: Implementation research and policy decisions. *Political Science Quarterly*, *94*(4), 601–616.

Fauzi, A. (2021). *Analysis of Ozone Technology Interventions for Economic Recovery during the COVID 19 Pandemic: A Case Study of Batu Bara District through Chili Production Center*.

Handayaningrat, S. (1996). Pengantar Studi Ilmu Administrasi & Manajemen. *Jakarta: Gunung Agung*.

Juraidi. (2021). *Medan Polbangtan Invites Communities to Develop Urban Farming. PSBB*. https://www.psbb.id/news/detail/1485/polbangtan-medan-ajak- Masyarakat - kembangkan-urban-farming

Mahmud, S., Hammond, G., Elliott, L., Hilderman, T., Kurbis, C., Caetano, P., Van Caeseele, P., Kettner, J., & Dawood, M. (2011). Effectiveness of the pandemic H1N1 influenza vaccines against laboratory-confirmed H1N1 infections: Population-based case–control

study. *Vaccine*, *29*(45), 7975–7981.
Mahmuudah, L. (2020). *Efektivitas pelaksanaan program urban farming dalam meningkatkan ketahanan pangan di Kota Bandung*. UIN Sunan Gunung Djati Bandung.
Maulud, M. I. (2023). *Urban Farming Becomes a Solution for Food Security in the City of Bandung. People's Mind Newspaper.* People's Mind Newspaper. https://koran.mind-rakyat.com/bandung-raya/pr-3036274729/urban-farming-jadi-solusi-ketahanan-pangan-di-kota-bandung . Accessed 12 July 2023, 00.39 WIB.
Mundiyah, A. I., Sari, N. M. W., Nabilah, S., & Suparyana, P. K. (2020). Pelatihan Budidaya Jamur Tiram Dengan Konsep Urban Farming Untuk Masyarakat Perkotaan. *Jurnal Pengabdian Al-Ikhlas Universitas Islam Kalimantan Muhammad Arsyad Al Banjary*, *6*(2).
Parede, Ã., Aguado, J., Essayeh, C., Xia, Y., Savelli, I., & Morstyn, T. (2023). Stacking Revenues from Flexible DERs in Multi-Scale Markets using Tri-Level Optimization. *IEEE Transactions on Power Systems*.
Pölling, B., Prados, M.-J., Torquati, B. M., Giacchè, G., Recasens, X., Paffarini, C., Alfranca, O., & Lorleberg, W. (2017). Business models in urban farming: A comparative analysis of case studies from Spain, Italy and Germany. *Moravian Geographical Reports*, *25*(3), 166–180.
Rosyad, A., Astuti, T. Y., & Tini, E. W. (2020). Penerapan Urban Farming Untuk Meningkatkan Kelestarian Lingkungan Pada Hunian Perumahan. *Jurnal Dinamika Pengabdian (JDP)*, *6*(1), 32–46.
Rusida, R. (2016). Potensi pengembangan pertanian perkotaan untuk mewujudkan kawasan perkotaan Belopa yang berkelanjutan. *Plano Madani: Jurnal Perencanaan Wilayah Dan Kota*, *5*(2), 125–135.
Safitri, H. O., Fauziningtyas, R., Indarwati, R., Efendi, F., & McKenna, L. (2022). Determinant factors of low birth weight in Indonesia: Findings from the 2017 Indonesian demographic and health survey. *Journal of Pediatric Nursing*, *63*, e102–e106.
Soim, A. (2021). *Trending Urban Farming, Sales of Horti Seeds Soar 5 Times. Sinartani Tabloid*. https://tabloidsinartani.com/detail/ index/ h orti/15596 -Urban-Farming-Nget ren-Sales-Horti-Seeds-Soared-5-Fold-Fold
Suhayatmi, Y. (2022). *Urban Farming, Food Security Solutions in DKI Jakarta. OKEfinance.*
Suwarlan, S. A. (2020). Perancangan Urban Farming Pada Pesisir Kampung Kelembak Kepulauan Riau. *Jurnal Linears*, *3*(1), 20–25.
Wahdah, L., & Maryono, M. (2018). Urban Farming Management System in Semarang City. *E3S Web of Conferences*, *73*, 3023.
Yulianto, H., Astiastari, N., & Damai, A. A. (2015). Analisis daya dukung perairan Puhawang untuk kegiatan budidaya sistem karamba jaring apung. *AQUASAINS*, *3*(2), 259–264.